

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

REDWOOD TECHNOLOGIES LLC,

Plaintiff,

V.

SONIM TECHNOLOGIES, INC.,

Defendant.

PLAINTIFF'S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Redwood Technologies LLC (“Redwood”) files this Complaint against Defendant Sonim Technologies, Inc. (“Sonim” or “Defendant”) for infringement of U.S. Patent No. 7,359,457 (the “‘457 patent”), U.S. Patent No. 7,917,102 (the “‘102 patent”), U.S. Patent No. 7,983,140 (the “‘140 patent”), U.S. Patent No. 8,218,501 (the “‘501 patent”), and U.S. Patent No. 10,498,571 (the “‘571 patent”), collectively, the “Asserted Patents.”

THE PARTIES

1. Redwood Technologies LLC is a Texas limited liability company, with a principal place of business at 812 West McDermott Dr. #1038, Allen, TX 75013.

2. On information and belief, Sonim Technologies, Inc. is a corporation organized under the laws of Delaware, with a regular and established place of business of its corporate headquarters located at 6500 River Place Blvd., Building 7, Suite 250, Austin, TX 78730.

3. Prior to the filing of the Complaint, Redwood sent a letter received by Sonim on January 27, 2022, where Redwood attempted to engage Sonim and/or its agents in licensing discussions related to the Asserted Patents for reasonable and non-discriminatory terms for a license to be taken in the absence of litigation. Sonim ignored Redwood's request to engage in

licensing discussions. Indeed, Sonim has known about the '457 patent, '102 patent, '140 patent, and '501 patent since at least January 27, 2022, when Sonim received notice of its infringement of these patents via the letter sent by Redwood. Sonim's past and continuing sales of its devices i) willfully infringe the '457 patent, '102 patent, '140 patent, and '501 patent and ii) impermissibly take the significant benefits of Redwood's patented technologies without fair compensation to Redwood.

4. Sonim is engaged in making, using, selling, offering for sale, and/or importing, and/or induces its subsidiaries, affiliates, retail partners, and customers in the making, using, selling, offering for sale, and/or importing throughout the United States, including within this District, products, such as access points, accused of infringement.

JURISDICTION AND VENUE

5. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

6. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has personal jurisdiction over Sonim in accordance with due process and/or the Texas Long Arm Statute because, among other things, Sonim does business in this State by, among other things, maintaining its corporate headquarters located at 6500 River Place Blvd., Building 7, Suite 250, Austin, TX 78730 and “recruit[ing] Texas residents, directly or through an intermediary located in this state, for employment inside or outside this state.” TEX. CIV. PRAC. & REM. CODE § 17.042(3):

Sonim Technologies

Sonim Technologies is a leading U.S. provider of ultra-rugged mobility solutions designed specifically for task workers

Telecommunications · Austin, Texas · 9,667 followers

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Sales Operations

Coordinator

Sonim Technologies

United States



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<https://www.linkedin.com/company/sonim-technologies/jobs/>.

8. Further, this Court has personal jurisdiction over Sonim because it has engaged, and continues to engage, in continuous, systematic, and substantial activities within this State, including the substantial marketing and sale of products and services within this State and this District. Indeed, this Court has personal jurisdiction over Sonim because it has committed acts giving rise to Redwood's claims for patent infringement within and directed to this District, has derived substantial revenue from its goods and services provided to individuals in this State and

this District, and maintains regular and established places of business in this District, including at least its corporate headquarters in Austin, TX.

9. Relative to patent infringement, Sonim has committed and continues to commit acts in violation of 35 U.S.C. § 271, and has made, used, marketed, distributed, offered for sale, imported, and/or sold infringing products in this State, including in this District, and otherwise engaged in infringing conduct within and directed at, or from, this District. Such products have been and continue to be offered for sale, distributed to, sold, and used in this District, and the infringing conduct has caused, and continues to cause, injury to Redwood, including injury suffered within this District. These are purposeful acts and transactions in this State and this District such that Sonim reasonably should know and expect that it could be haled into this Court because of such activities.

10. In addition, Sonim has knowingly induced and continues to knowingly induce infringement within this District by advertising, marketing, offering for sale and/or selling devices pre-loaded with infringing functionality within this District, to consumers, customers, manufacturers, distributors, resellers, partners, and/or end users, and providing instructions, user manuals, advertising, and/or marketing materials which facilitate, direct or encourage the use of infringing functionality with knowledge thereof.

11. Venue is proper in this District under 28 U.S.C. §§ 1331 and 1400(b) because Sonim has regular and established places of business in this District and has committed acts of infringement in this District. Sonim's regular and established places of business in this District include, at least, its Austin corporate headquarters.

12. With respect to the '457 patent, the '102 patent, the '140 patent, and the '571 patent, the Accused Products are devices that include, but are not limited, to Defendant's mobile devices

that support IEEE 802.11n and/or IEEE 802.11ac (e.g., XP3, XP3plus, XP5, XP5s, XP6, XP7, XP8, XP8800, RS60, RS80, RT80, Ex-Handy 09, Ex-Handy 209, Ex-Handy 209-A, KWSA50K, KWSA80K, Smart-Ex 01, Smart-Ex 201, and Smart-Ex 201-A), as well as, their components, and processes related to the same. With respect to the '501 patent, the Accused Products are devices that include, but are not limited, to Defendant's mobile devices that support IEEE 802.11k and/or IEEE 802.11r (e.g., XP5s, XP8, XP8800, and KWSA50K), as well as, their components, and processes related to the same.

COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 7,359,457)

13. Plaintiff incorporates paragraphs 1 through 12 herein by reference.

14. Redwood is the assignee of the '457 patent, entitled "Transmission Apparatus, Reception Apparatus and Digital Radio Communication Method," with ownership of all substantial rights in the '457 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

15. The '457 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '457 patent issued from U.S. Patent Application No. 10/827,445.

16. Sonim has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '457 patent in this judicial district and elsewhere in Texas and the United States.

17. Sonim directly infringes the '457 patent via 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing the Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '457 patent.

18. For example, Sonim infringes claim 1 of the '457 patent via the Accused Products. The Accused Products each comprise a transmission apparatus of claim 1.

19. The Accused Products each comprise circuitry and/or components (hardware and/or software) that determine a modulation system from among a plurality of modulation systems based on a communication situation. For example, the Accused Products utilize a Modulation and Coding Scheme (MCS) value that is used to determine the modulation, coding, and number of spatial channels based on information associated with a channel quality assessment. *See, e.g.*, Sections 19.3.5 and 19.3.13.4 of Part 11: Wireless LAN Medium Access Control (MAC) and Physical (PHY) Specifications of IEEE Std 802.11™ -2016 (“IEEE 802.11 2016”). Based on the results of the channel quality assessment, an appropriate MCS value is selected from a plurality of MCS values for transmissions sent by the Accused Products. *See, e.g.*, Section 19.3.5 and Table 19-27 of IEEE 802.11 2016.

20. The Accused Products each comprise circuitry and/or components (hardware and/or software) that modulate a digital transmission signal according to the modulation system previously determined and generates a first symbol. The first symbol comprises a first quadrature baseband signal. For example, the Accused Products generate a first data symbol (e.g., data), comprising a first quadrature baseband signal, that is modulated according to the MCS value. *See, e.g.*, Section 19.3.5 and Figure 19-22 of IEEE 802.11 2016.

21. The Accused Products each comprise circuitry and/or components (hardware and/or software) that modulates the digital signal according to a predetermined modulation system and generates a second symbol. The second symbol comprises a second quadrature baseband signal. For example, the Accused Products generate a second data symbol (e.g., the HT-SIG), comprising a second quadrature baseband signal, that is modulated according to a predetermined

modulation system (e.g., QPSK). *See, e.g.*, Section 19.3.9.4.3 and Figure 19-22 of IEEE 802.11 2016.

22. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

23. At a minimum, Sonim has known of the '457 patent at least as early as the filing date of the complaint. In addition, Sonim has known about the '457 patent since at least January 27, 2022, when Sonim received notice of its infringement via a letter.

24. On information and belief, since at least the above-mentioned date when Sonim was on notice of its infringement, Sonim has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, use, purchase, offer to sell, or sell the Accused Products comprising all of the limitations of one or more claims of the '457 patent to directly infringe one or more claims of the '457 patent by using, offering for sale, selling, and/or importing the '457 Accused Products. Since at least the notice provided on the above-mentioned date, Sonim does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '457 patent. Sonim intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

25. On information and belief, despite having knowledge of the '457 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '457 patent, Sonim has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Sonim's infringing activities relative to the '457 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

26. Redwood has been damaged as a result of Sonim's infringing conduct described in this Count. Sonim is, thus, liable to Redwood in an amount that adequately compensates Redwood for Sonim's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 7,917,102)

27. Plaintiff incorporates paragraphs 1 through 26 herein by reference.

28. Redwood is the assignee of the '102 patent, entitled "Radio Transmitting Apparatus and Radio Transmission Method," with ownership of all substantial rights in the '102 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

29. The '102 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '102 patent issued from U.S. Patent Application No. 11/937,422.

30. Sonim has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '102 patent in this judicial district and elsewhere in Texas and the United States.

31. Sonim directly infringes the '102 patent via 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing the Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '102 patent.

32. For example, Sonim infringes claim 3 of the '102 patent via the Accused Products. Each of the Accused Products comprise a radio transmitting apparatus that transmits a modulated signal.

33. The Accused Products each comprise circuitry and/or components (hardware and/or software) that forms a transmission frame which includes a frequency offset estimation signal for estimating frequency offset of the modulated signal at a receiving apparatus, a channel fluctuation estimation signal for estimating channel fluctuation of the modulated signal at the receiving apparatus and a gain control signal for performing gain control of the modulated signal at the receiving apparatus. *See, e.g.*, Section 19.1.4 of IEEE 802.11 2016. For example, the Accused Products each form a HT-mixed format PPDU frame, which comprises an L-LTF subframe, which is a frequency offset estimation signal. *See, e.g.*, Figure 17-4 of IEEE 802.11 2016. The HT-mixed format PPDU frame also comprises an HT-LTF subframe, which is a channel fluctuation estimation signal. *See, e.g.*, Section 19.3.9.4.6 of IEEE 802.11 2016. The HT-mixed format PPDU frame also comprises an L-STF subframe, which is a gain control signal. *See, e.g.*, Section 19.3.9.3.3 of IEEE 802.11 2016.

34. The Accused Products each comprise circuitry and/or components (hardware and/or software) that transmits the transmission frame. *See, e.g.*, Figure 19-2 of IEEE 802.11 2016. The transmission frame includes a first gain control signal and a second gain control signal. For example, the HT-mixed format PPDU comprises a first gain control signal in the L-STF subframe and a second gain control signal in the HT-STF subframe. *See, e.g.*, Sections 19.3.9.3.3 and 19.3.9.4.5 of IEEE 802.11 2016. The first gain control signal is arranged prior to the frequency offset estimation signal. For example, the L-STF subframe is arranged prior to the L-LTF subframe. *See, e.g.*, Section 19.1.4 of IEEE 802.11 2016. The second gain control is arranged subsequent to the frequency offset estimation signal and prior to the channel fluctuation estimation signal. For example, the HT-STF subframe is arranged subsequent to the L-LTF subframe and prior to the HT-LTF subframe. *See, e.g.*, Section 19.1.4 of IEEE 802.11 2016.

35. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

36. At a minimum, Sonim has known of the '102 patent at least as early as the filing date of the complaint. In addition, Sonim has known about the '102 patent since at least January 27, 2022, when Sonim received notice of its infringement via a letter.

37. On information and belief, since at least the above-mentioned date when Sonim was on notice of its infringement, Sonim has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, use, purchase, offer to sell, or sell the Accused Products comprising all of the limitations of one or more claims of the '102 patent to directly infringe one or more claims of the '102 patent by using, offering for sale, selling, and/or importing the '102 Accused Products. Since at least the notice provided on the above-mentioned date, Sonim does so with knowledge, or with willful blindness of the fact, that

the induced acts constitute infringement of the '102 patent. Sonim intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

38. On information and belief, despite having knowledge of the '102 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '102 patent, Sonim has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Sonim's infringing activities relative to the '102 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

39. Redwood has been damaged as a result of Sonim's infringing conduct described in this Count. Sonim is, thus, liable to Redwood in an amount that adequately compensates Redwood for Sonim's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 7,983,140)

40. Plaintiff incorporates paragraphs 1 through 39 herein by reference.

41. Redwood is the assignee of the '140 patent, entitled "Transmitting Apparatus, Receiving Apparatus, and Communication System for Formatting Data," with ownership of all substantial rights in the '140 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

42. The '140 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '140 patent issued from U.S. Patent Application No. 11/004,256.

43. Sonim has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '140 patent in this judicial district and elsewhere in Texas and the United States.

44. Sonim directly infringes the '140 patent via 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing the Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '140 patent.

45. For example, Sonim infringes claim 1 of the '140 patent via the Accused Products. The Accused Products comprise a transmitting apparatus, in an orthogonal frequency division multiplexing communication system. *See, e.g.*, Sections 17.3.8.2 and 19.1.1 of IEEE 802.11 2016.

46. The Accused Products each comprise circuitry and/or components (hardware and/or software) for converting a transmission signal into a transmission time slot. *See, e.g.*, Section 17.3.8.2 of IEEE 802.11 2016. For example, the Accused Products convert PSDUs into PPDUs. *See, e.g.*, Sections 17.3.1 and 17.3.2.1 of IEEE 802.11 2016.

47. The Accused Products each comprise circuitry and/or components (hardware and/or software) for generating a frame that includes a series of n (greater than 1) time slots and a

frame guard period added to the series of n time slots, where each time slot includes an effective symbol period and guard period added to the effective symbol period, where the length of the series of n time slots is less than the length of the frame. For example, each of the Accused Products generates a PPDU frame that comprises a series of time slots associated with the signal and data OFDM symbols. *See, e.g.*, Figures 17-1 and 17-4 of IEEE 802.11 2016. Each of the Accused Products generates cyclic shifts that are added to the series of n time slots. *See, e.g.*, Sections 19.3.4 and 19.3.9.3.2 of IEEE 802.11 2016. Each time slot in the PPDU frame comprises an effective symbol period, and a guard period is added at the start of each effective symbol period. *See, e.g.*, Table 19-6 and Figure 17-4 of IEEE 802.11 2016. Further, the length of the series of n time slots is less than the total length of the PPDU frame. *See, e.g.*, Figure 17-4 of IEEE 802.11 2016.

48. The Accused Products each comprise circuitry and/or components (hardware and/or software) for transmitting the generated frame as a radio signal. *See, e.g.*, Section 17.3.8.2 of IEEE 802.11 2016.

49. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

50. At a minimum, Sonim has known of the '140 patent at least as early as the filing date of the complaint. In addition, Sonim has known about the '140 patent since at least January 27, 2022, when Sonim received notice of its infringement via a letter.

51. On information and belief, since at least the above-mentioned date when Sonim was on notice of its infringement, Sonim has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, use, purchase, offer to sell, or sell the Accused Products comprising all of the limitations of one or more claims of the

'140 patent to directly infringe one or more claims of the '140 patent by using, offering for sale, selling, and/or importing the '140 Accused Products. Since at least the notice provided on the above-mentioned date, Sonim does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '140 patent. Sonim intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

52. On information and belief, despite having knowledge of the '140 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '140 patent, Sonim has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Sonim's infringing activities relative to the '140 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

53. Redwood has been damaged as a result of Sonim's infringing conduct described in this Count. Sonim is, thus, liable to Redwood in an amount that adequately compensates Redwood

for Sonim's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV

(INFRINGEMENT OF U.S. PATENT NO. 8,218,501)

54. Plaintiff incorporates paragraphs 1 through 53 herein by reference.

55. Redwood is the assignee of the '501 patent, entitled "Data Forwarding Controller, Communication Terminal Apparatus, Data Communication System and Method, and Computer Program for Performing Handover for a Mobile Node," with ownership of all substantial rights in the '501 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

56. The '501 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '501 patent issued from U.S. Patent Application No. 12/116,779.

57. Sonim has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '501 patent in this judicial district and elsewhere in Texas and the United States.

58. Sonim directly infringes the '501 patent via 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing the Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '501 patent.

59. For example, Sonim infringes claim 1 of the '501 patent via the Accused Products. The Accused Products comprise a mobile communication terminal apparatus which performs data transmission/reception via a network and which changes access points based on data receiving conditions. *See, e.g.*, Figure 13-5 of IEEE 802.11 2016.

60. The Accused Products each comprise circuitry and/or components (hardware and/or software) configured to acquire a MAC address of a next access point to which the Accused Products are scheduled to be connected next after a handover from a current access point, and broadcast a handover start message containing the acquired MAC address of the next access point. For example, each of the Accused Products are configured to scan for beacon frames from neighborhood access points in a Neighbor Report element comprising the BSSID and BSSID information of neighborhood access points capable of Fast BSS Transition, where the Accused Products are configured to acquire the BSSID and BSSID information of a received beacon of a target access point to be connected to next after a handover from a current access point. *See, e.g.*, Figures 9-295, 9-296, 13-5 and Sections 9.4.2.37, 11.11.10.2, 11.11.10.3, and 13.3 of IEEE 802.11 2016. Further, each of the Accused Products are configured to broadcast a start message requesting a handover that comprises the BSSID of the target access point. *See, e.g.*, Figure 13-5 and Section 13.5.3 of IEEE 802.11 2016.

61. The Accused Products each comprise circuitry and/or components (hardware and/or software) configured to perform a handover process on condition that the Accused Products receive a handover setting completion message from a data forwarding controller as a response to the handover start message. For example, each of the Accused Products are configured to receive a handover setting completion message from a station management entity (“SME”) of the target access point in response to the handover start message, where the Accused Products are configured to perform a handover after receiving the handover setting completion message. *See, e.g.*, Figure 13-6 and Sections 9.4.1.9, 13.5.3, and 13.8.3 of IEEE 802.11 2016.

62. The Accused Products each comprise circuitry and/or components (hardware and/or software) configured to perform a background scanning process by which all wireless

channels are periodically scanned to acquire and store a source MAC address of a received beacon as the MAC address of the next access point. For example, each of the Accused Products are configured to periodically scan for beacon frames from neighborhood access points in a Neighbor Report element comprising the BSSID and BSSID information of neighborhood access points capable of Fast BSS Transition, where the Accused Products are configured to acquire and store the BSSID and BSSID information of a received beacon of the target access point. *See, e.g.*, Figures 9-295, 9-296, 13-5 and Sections 9.4.2.37, 11.11.10.2, 11.11.10.3, and 13.3 of IEEE 802.11 2016.

63. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

64. At a minimum, Sonim has known of the '501 patent at least as early as the filing date of the complaint. In addition, Sonim has known about the '501 patent since at least January 27, 2022, when Sonim received notice of its infringement via a letter.

65. On information and belief, since at least the above-mentioned date when Sonim was on notice of its infringement, Sonim has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, use, purchase, offer to sell, or sell the Accused Products comprising all of the limitations of one or more claims of the '501 patent to directly infringe one or more claims of the '501 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, Sonim does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '501 patent. Sonim intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of

the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

66. On information and belief, despite having knowledge of the '501 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '501 patent, Sonim has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Sonim's infringing activities relative to the '501 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

67. Redwood has been damaged as a result of Sonim's infringing conduct described in this Count. Sonim is, thus, liable to Redwood in an amount that adequately compensates Redwood for Sonim's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT V

(INFRINGEMENT OF U.S. PATENT NO. 10,498,571)

68. Plaintiff incorporates paragraphs 1 through 67 herein by reference.

69. Redwood is the assignee of the '571 patent, entitled "Transmission Apparatus, Reception Apparatus and Digital Radio Communication Method," with ownership of all

substantial rights in the '571 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

70. The '571 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '571 patent issued from U.S. Patent Application No. 16/361,363.

71. Sonim has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '571 patent in this judicial district and elsewhere in Texas and the United States.

72. Sonim directly infringes the '571 patent via 35 U.S.C. § 271(a) by using and/or testing the Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '571 patent.

73. For example, Sonim infringes claim 8 of the '571 patent via the Accused Products. The Accused Products perform a digital radio communication method. *See, e.g.*, Figure 19-2 of IEEE 802.11 2016.

74. The Accused Products each select a first modulation scheme from a plurality of modulation schemes based on a communication situation. For example, each of the Accused Products utilize a Modulation and Coding Scheme (MCS) value that is used to determine the modulation, coding, and number of spatial channels based on information associated with a channel quality assessment. *See, e.g.*, Sections 19.3.5 and 19.3.13.4 of IEEE 802.11 2016. Based on the results of the channel quality assessment, an appropriate MCS value is selected from a plurality of MCS values for transmissions sent by the Accused Products. *See, e.g.*, Section 19.3.5 and Table 19-27 of IEEE 802.11 2016.

75. The Accused Products each generate a first symbol using the selected first modulation scheme, where the first symbol comprises a first quadrature baseband signal. For example, each of the Accused Products generate a first data symbol (e.g., data), comprising a first quadrature baseband signal, that is modulated according to the MCS value. *See, e.g.*, Section 19.3.5 and Figure 19-22 of IEEE 802.11 2016.

76. The Accused Products each generate a second symbol comprising a pilot symbol using a phase shift keying (PSK) modulation scheme, where the second symbol comprises a second quadrature baseband signal. For example, each of the Accused Products generate a second data symbol (e.g., the HT-SIG), comprising a second quadrature baseband signal, that is modulated according to a predetermined modulation system (e.g., QPSK). *See, e.g.*, Section 19.3.9.4.3 and Figure 19-22 of IEEE 802.11 2016.

77. The Accused Products each transmit a data signal comprising the first symbol and second symbol. For example, each of the Accused Products transmit an HT-mixed format PPDU signal comprising a data symbol and an HT-SIG symbol. *See, e.g.*, Figure 19-22 of IEEE 802.11 2016.

78. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

79. At a minimum, Sonim has known of the '571 patent at least as early as the filing date of the complaint.

80. On information and belief, since at least the above-mentioned date when Sonim was on notice of its infringement, Sonim has actively induced, under U.S.C. § 271(b), its distributors, customers, testing outfits, subsidiaries, and/or consumers that use the Accused Products comprising all of the limitations of one or more claims of the '571 patent to directly

infringe one or more claims of the '571 patent by using the '571 Accused Products. Since at least the notice provided on the above-mentioned date, Sonim does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '571 patent. Sonim intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, testing outfits, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

81. On information and belief, despite having knowledge of the '571 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '571 patent, Sonim has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Sonim's infringing activities relative to the '571 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

82. Redwood has been damaged as a result of Sonim's infringing conduct described in this Count. Sonim is, thus, liable to Redwood in an amount that adequately compensates Redwood

for Sonim's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

CONCLUSION

83. Plaintiff Redwood is entitled to recover from Sonim the damages sustained by Plaintiff as a result of Sonim's wrongful acts, and willful infringement, in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

84. Plaintiff has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case within the meaning of 35 U.S.C. § 285, and Plaintiff is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

85. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

86. Plaintiff respectfully requests that the Court find in its favor and against Sonim, and that the Court grant Plaintiff the following relief:

1. A judgment that Sonim has infringed the Asserted Patents as alleged herein, directly and/or indirectly by way of inducing infringement of such patents;
2. A judgment for an accounting of all damages sustained by Plaintiff as a result of the acts of infringement by Sonim;

3. A judgment and order requiring Sonim to pay Plaintiff damages under 35 U.S.C. § 284, including up to treble damages as provided by 35 U.S.C. § 284, and any royalties determined to be appropriate;
4. A judgment and order requiring Sonim to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;
5. A judgment and order finding this to be an exceptional case and requiring Sonim to pay the costs of this action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. § 285; and
6. Such other and further relief as the Court deems just and equitable.

Dated: February 10, 2022

Respectfully submitted,

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